

50. (Newly Added) The electronic device package according to claims 47 or 48, wherein said frame is formed of a copper metal sheet having a thickness of approximately 200 microns.

51. (Newly Added) The electronic device package according to claim 47, wherein said frame is coated with about 10 micro inches of palladium.

52. (Newly Added) The electronic device package according to claim 38, wherein said device is bonded to sad pad using conductive epoxy.

53. (Newly Added) The electronic device package according to claim 39, wherein said wire is formed of gold wire having a diameter of approximately 25 microns.

REMARKS

This is a full and timely response to the outstanding final Office Action mailed August 8, 2001. Reconsideration and allowance of the application and presently pending claims 1-3, 5-7, and 21-53, as amended, are respectfully requested.

1. Present Status of Patent Application

Upon entry of the amendments in this response, claims 1-3, 5-7, and 21-53 remain pending in the present application. More specifically, claims 1-3 and 5 are directly amended, and claims 21-53 have been added. The foregoing amendments and additions add no new matter to the present application.

2. Response to Rejection of Claims 2, 4, and 5 Under 35 U.S.C. §112, Second Paragraph

Claims 2, 4, and 5 were rejected under 35 U.S.C. §112, Second Paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which

the Applicants regard as their invention. Specific language was objected to and particularly pointed out in the outstanding office action.

Claims 2 and 5 are amended herein, as requested by the Examiner, to overcome all instances of objectionable language. In addition, Applicants have cancelled claim 4 without prejudice, disclaimer, or waiver.

In view of the above described amendments, it is respectfully asserted that claims 2 and 5 currently define the invention in the manner required by 35 U.S.C. § 112. Accordingly, it is respectfully asserted that the rejections to these claims be withdrawn.

3. Response to Rejection of Claims 1-9 Under 35 U.S.C. §102(b)

Claims 1-9 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by *LeMaire* (U.S. Patent No. 5,134,773). For a proper rejection of a claim under 35 U.S.C. Section 102, the cited references must disclose all elements and features of the claim. *See, e.g., E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 U.S.P.Q.2d 1129 (Fed. Cir. 1988). Applicants respectfully assert that this rejection has been overcome by amendment.

a. Claim 1

As provided in independent claim 1, as amended, Applicants claim:

1. A microelectronic device package comprising:
a die attach pad, said pad having a bottom surface;
a plurality of substantially flat electrical connectors formed about a perimeter of said die attach pad, wherein said connectors are configured to couple a device to a substrate; and
an encapsulant surrounding a portion of said electrical connectors and a portion of said die attach pad, wherein said bottom surface of said die attach pad is substantially free of encapsulant.

(emphasis added).

Applicants respectfully submit that independent claim 1, as amended, is allowable for at least the reason that *LeMaire* does not disclose, teach, or suggest anywhere in the specification or in the figures at least the feature of “a plurality of substantially flat electrical connectors formed about a perimeter of said die attach pad, wherein said connectors are configured to couple a device to a substrate” as recited in claim 1. *LeMaire* is apparently limited to an electronic module whose contact members provide contact points for an electronic device, but does not serve to attach the module to a substrate. Rather, the module in *LeMaire* appears to be secured in the credit card by being clamped between the shells of a mould. (Col. 8, Lines 49-56). Thus, Applicants respectfully assert that *LeMaire* does not anticipate independent claim 1 and request that the rejection of these claims be withdrawn.

b. Claim 2

Because independent claim 1 is believed to be allowable over the prior art of record, dependent claim 2 (which depends from independent claim 1) is allowable as a matter of law for at least the reason that the dependent claim 2 contains all the features and elements of independent claim 1.

c. Claim 3

Because independent claim 1 is believed to be allowable over the prior art of record, dependent claim 3 (which depends from independent claim 1) is allowable as a matter of law for at least the reason that the dependent claim 3 contains all the features/elements of independent claim 1. Additionally and notwithstanding the foregoing reasons for allowability of independent claim 1, dependent claim 3 recites further features that are patentably distinct from the prior art of record. Specifically, *LeMaire* does not seemingly disclose the feature of the connectors and

pad being “formed from an *etched* sheet of conductive material having removable material attached thereto,” as disclosed in claim 3. (emphasis added). Hence, there are other reasons why this dependent claim is allowable.

d. Claim 4

Applicants respectfully request that claim 4 be cancelled without prejudice, waiver, or disclaimer. Applicants reserve the right to pursue the subject matter of canceled claim 4 in a continuing application, if Applicants so choose, and do not intend to dedicate any of the canceled subject matter to the public.

e. Claim 5

Because independent claim 1 is believed to be allowable over the prior art of record, dependent claim 5 (which depends from independent claim 1) is allowable as a matter of law for at least the reason that the dependent claim 5 contains all the features/elements of independent claim 1. Additionally and notwithstanding the foregoing reasons for allowability of independent claim 1, dependent claim 5 recites further features that are patentably distinct from the prior art of record. Specifically, *LeMaire* does not appear to disclose the element of “a coupling of a *plurality* of wires to one of said connectors,” as disclosed in claim 5. (emphasis added). For example, Figure 5 of *LeMaire* only displays one wire connected to each individual contact. Hence, there are other reasons why this dependent claim is allowable.

f. Claim 6

As provided in independent claim 6, Applicants claim:

6. An electronic device package configured to facilitate electrical connection between a device and a substrate, said package comprising:
a plurality of rows of electrical connectors formed by etching a sheet of conductive material; and
an encapsulant attached to a portion of each of said plurality of electrical connectors,
wherein said encapsulant is molded to each said portion by exposing said electrical connectors and a removable material attached to said connectors to a mold process.

(emphasis added).

Applicants respectfully submit that independent claim 6 is allowable for at least the reason that *LeMaire* does not disclose, teach, or suggest anywhere in the specification or in the figures at least the feature of a microelectronic device package having “a *plurality of rows* of electrical connectors formed by etching a sheet of conductive material” as recited in claim 6. (emphasis added). Applicants believe that *LeMaire* does not disclose, teach, or suggest an electronic device package having a *plurality of rows* of electrical connectors, as presently recited in Applicants’ claim 6. Applicants assert that Figure 5 in *LeMaire* fails to disclose this feature, since the embodiment in the figure reveals, at most, only a *single row* of conductors around the perimeter of the device.

Further, Applicants respectfully submit that claim 6 is allowable for at least the reason that *LeMaire* does not disclose, teach, or suggest anywhere in the specification or in the figures at least the feature of “a plurality of rows of electrical connectors formed by *etching* a sheet of conductive material,” as presently recited in claim 6. (emphasis added). Applicants assert that *LeMaire* fails to disclose this feature, since *LeMaire* seemingly discloses an “electronic module

[that] is formed by producing the electronic circuit in a precut and preformed metal strip.”

Thus, *LeMaire* does not anticipate claim 6, and the rejection should be withdrawn.

g. Claim 7

Because independent claim 6 is believed to be allowable over the prior art of record, dependent claim 7 (which depends from independent claim 6) is allowable as a matter of law for at least the reason that the dependent claim 7 contains all the features and elements of independent claim 6.

h. Claim 8

Applicants respectfully request that claim 8 be cancelled without prejudice, waiver, or disclaimer. Applicants reserve the right to pursue the subject matter of canceled claim 8 in a continuing application, if Applicants so choose, and do not intend to dedicate any of the canceled subject matter to the public.

i. Claim 9

Applicants respectfully request that claim 9 be cancelled without prejudice, waiver, or disclaimer. Applicants reserve the right to pursue the subject matter of canceled claim 9 in a continuing application, if Applicants so choose, and do not intend to dedicate any of the canceled subject matter to the public.

4. New Claims 21-53

New claims 21-53 are based on subject matter that is explicit and/or inherent within the description of the specification and/or inherent within the drawings. Applicants submit that no

new matter has been added in the new claims 21-53, and that new claims 21-53 are allowable over the cited prior art.

a. Claims 21-36

Because independent claim 1 is believed to be allowable over the prior art of record, dependent claims 21-36 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that the dependent claims 21-36 contain all the features and elements of independent claim 1. Therefore, Applicants request the Examiner to enter and allow the above new claims.

b. Claims 37-53

Because independent claim 6 is believed to be allowable over the prior art of record, dependent claims 37-53 (which depend from independent claim 6) are allowable as a matter of law for at least the reason that the dependent claims 37-53 contain all the features and elements of independent claim 6. Therefore, Applicants request the Examiner to enter and allow the above new claims.



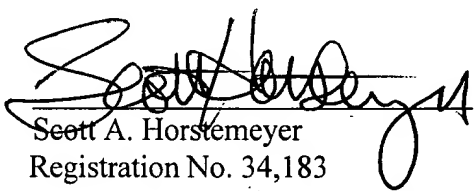
CONCLUSION

at least the foregoing reasons, all rejections and objections have been rendered moot, accommodated, and/or traversed, and Applicants respectfully request that all outstanding rejections be withdrawn and that all pending claims 1-3, 5-7, and 21-53 of this application be allowed to issue. If the Examiner has any comments regarding Applicants' response or intends to dispose of this matter in a manner other than a notice of allowance, Applicants request that the Examiner telephone Applicants' undersigned agent.

Respectfully submitted,

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ANNOTATED VERSION OF MODIFIED CLAIMS TO SHOW CHANGES MADE

The following is a marked up version of the amended claims, wherein brackets denoted deletions and underlining denotes additions.

1. (Twice Amended) A microelectronic device package comprising:
a die attach pad, said pad having a bottom surface;
a plurality of substantially flat electrical connectors formed about a perimeter of said die attach pad, wherein said connectors are configured to couple a device to a substrate; and
an encapsulant surrounding a portion of said electrical connectors and a portion of said die attach pad, wherein said bottom surface of said die attach pad is substantially free of encapsulant.
2. (Once Amended) The microelectronic device package according to claim 1, wherein said connectors and said pad are formed from a leadframe.
3. (Once Amended) The microelectronic device package according to claim 1, wherein said connectors and said pad are formed from an etched [by etching a] sheet of conductive material having removable material attached thereto.
5. (Twice Amended) The microelectronic device package according to claim 1, further comprising a coupling of a plurality of wires [coupled] to one of said connectors.